

From: [Weinstock, Lewis](#)
To: [Mackey, Lawrence J.](#)
Cc: [Chen, Xi](#); [Compher, Michael](#); [Siegel, Kathryn](#); [Newton, Cheryl](#); [Nam, Ed](#)
Subject: RE: Request for information (Lake County)
Date: Thursday, March 07, 2019 6:26:45 AM

Hi Larry:

We will be available to help next week as needed. The Region 5 staff have a lot of experience with EtO monitoring and they very well may be able to answer most of your questions if the Friday call works out. But we are available as a resource as needed, perhaps working in parallel with Reg 5 to avoid duplication of effort going forward. Perhaps one recommendation I might make is to consider using our national contract lab (Eastern Research Group or ERG) as the analytical arm of your program. The Village of Willowbrook and Sterigenic's programs are using two other labs as subcontractor's to their on-site companies, and while we have not identified any issues with their procedures, we do have more direct knowledge and a closer working relationship with ERG at this point. Just something to consider.

Lewis Weinstock | Office of Air Quality Planning & Standards | U.S. Environmental Protection Agency | Research Triangle Park, NC 27711 | Phone: 919-541-3661|

From: Mackey, Lawrence J. <LMackey@lakecountytill.gov>
Sent: Wednesday, March 06, 2019 5:26 PM
To: Weinstock, Lewis <Weinstock.Lewis@epa.gov>
Cc: Chen, Xi <Chen.Xi@epa.gov>; Compher, Michael <compher.michael@epa.gov>
Subject: RE: Request for information (Lake County)

Lewis-

Thank you very much for your response and for the info you provided. Regarding developing a sampling plan, we have been in communication with the ATSDR folks and want to be sure that the data we produce is useful to them to conduct a health assessment. Additionally, we have reached out to the people at the Illinois Department of Health to conduct a cancer rate analysis and they have indicated that the sampling locations will be important to them to assess their study area. Lastly, we have given consideration to sampling in a demographically similar community a good distance away from either of the two sites in our County to potentially help determine a more comprehensive background level.

I appreciate your offer to meet by phone, and I think that next week would be fine. We are trying to finalize arrangements for a call with Ed Nam and some of his staff at Region 5 on Friday. I am hoping that that meeting will give us some direction, but I am not sure of the level of detail we will get into. Would you be OK with me reaching out to you on Monday to possibly arrange a call with you and your staff? Thanks again for your help.

This is definitely not in our wheelhouse in terms of expertise.

Larry

Lawrence J. Mackey, LEHP

Deputy Director, Prevention

Lake County Health Department and Community Health Center

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From: Weinstock, Lewis <Weinstock.Lewis@epa.gov>

Sent: Wednesday, March 6, 2019 3:01 PM

To: Mackey, Lawrence J. <LMackey@lakecountyil.gov>

Cc: Chen, Xi <Chen.Xi@epa.gov>; Compher, Michael <compher.michael@epa.gov>

Subject: RE: Request for information (Lake County)

Hi Larry:

Thanks for your inquiry. We will be happy to assist in any way that we can. I am including a link to our Willowbrook ambient sampling QAPP that covers the existing EPA managed program. I am also copying this message to Doris Chen, our lead scientist on the program who works very closely with our contract lab, and Michael Compher, the Region 5 monitoring supervisor.

<https://www.epa.gov/il/quality-assurance-project-plan>

There are a number of decisions to make in any kind of sampling plan such as number and location of sites, sampling frequency, study duration, QA and data validation protocols, and the need for supporting information such as meteorology. Our Willowbrook project provides a good model for how such a program can be designed, but there is nothing magical about the choices we made. All were driven by the objectives of the study, the existing information about EtO in the area, and available resources. I would be happy to discuss all of these issues in more detail if you feel that would be helpful. Doris is also available for highly technical questions on the TO-15 method itself and how it was optimized for EtO.

Tomorrow looks to be a crazy day here as we are preparing for another data rollout but perhaps we can schedule a call for early next week. Please let us know how we can help.

Lewis Weinstock | Office of Air Quality Planning & Standards | U.S. Environmental Protection Agency | Research

From: Mackey, Lawrence J. <LMackey@lakecountyil.gov>

Sent: Tuesday, March 05, 2019 5:49 PM

To: Weinstock, Lewis <Weinstock.Lewis@epa.gov>

Subject: FW: Request for information

Mr. Weinstock-

I received your contact information from Tim Halik, the Administrator from the Village of Willowbrook, Illinois. I am with the Lake County Illinois Health Department and we are currently pursuing the possibility of hiring a consultant to do air monitoring for EtO around two facilities here in our County. I had sent the message below to Ed Nam at Region 5, but Tim informed me that you may be a good source of information for us.

Specifically, as I indicated below, we are interested in obtaining EPA's approved/preferred EtO monitoring plan methodology, and also any quality assurance project plan (QAPP) that may exist. While we will be hiring a consultant to conduct the sampling if move forward with it, and they likely will either be familiar with these protocols or will be able to obtain them, we need some information upfront to include in a potential request for proposals or bid on the job. We also want to assure that any sampling that is done will be valid and acceptable to ATSDR to conduct a health/risk assessment based on the results.

Any help you can provide would be appreciated. Thank you.

Larry

Lawrence J. Mackey, LEHP

Deputy Director, Prevention

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From: Mackey, Lawrence J.

Sent: Tuesday, March 5, 2019 4:12 PM

To: 'Nam, Ed' <nam.ed@epa.gov>

Subject: Request for information

Ed-

We are nearing a decision to hire a consultant to conduct air monitoring for EtO around the two sites in Lake County. Our Executive Director, Mark Pfister, has asked me to reach out to you to obtain the EPA's approved/preferred EtO monitoring plan methodology, and also your quality assurance project plan (QAPP). We want to assure that any testing we conduct meets the same standards and has the same validity of samples collected by EPA.

As of now, I have found the specs on the test method (Method TO-15), but that is all we have. If you were able to pass this message along to the appropriate technical people at your agency, we would appreciate it if they could provide us with these specifications so that we could potentially include them in a request for proposals. Thank you in advance for your assistance.

Larry

Lawrence J. Mackey, LEHP

Deputy Director, Prevention

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From: [Mackey, Lawrence J.](#)
To: [Nam, Ed](#)
Cc: [Compher, Michael](#); [Siegel, Kathryn](#); [Weinstock, Lewis](#); [Julie Armitage](#)
Subject: RE: Request for information
Date: Thursday, March 07, 2019 8:30:25 AM

Great, thank you very much, Ed. I will be sending out an invite with a conference line shortly.

From: Nam, Ed <nam.ed@epa.gov>
Sent: Thursday, March 7, 2019 8:21 AM
To: Mackey, Lawrence J. <LMackey@lakecountyil.gov>
Cc: Compher, Michael <compher.michael@epa.gov>; Siegel, Kathryn <siegel.kathryn@epa.gov>; Weinstock, Lewis <Weinstock.Lewis@epa.gov>; Julie Armitage <Julie.Armitage@Illinois.gov>
Subject: Re: Request for information

Hi Larry

We'd be happy to meet at noon on Friday. I'll send a calendar invite with a call in number. I also invited Julie Armitage at IEPA if she or her staff are available at this time to join us.

I also see that you reached out to Lew. I think that We can probably address most of your questions. If you still have some open questions we can get answers for you after the call.

I look forward to our meeting on Friday. Feel free to come in person if you are in the neighborhood.

Ed

Sent from my iPhone

On Mar 6, 2019, at 9:14 AM, Mackey, Lawrence J. <LMackey@lakecountyil.gov> wrote:

Ed-

Thanks so much for the information. We can have our team available for a phone conference on Friday at 12:00 noon, or at 4:00 pm. Would either of those times work for you? If so, please let me know and I will send an invite with the conference line info. Thanks again for your help.

Larry

Lawrence J. Mackey, LEHP

Deputy Director, Prevention

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From: Nam, Ed <nam.ed@epa.gov>

Sent: Wednesday, March 6, 2019 8:32 AM

To: Mackey, Lawrence J. <LMackey@lakecountyil.gov>

Cc: Compher, Michael <compher.michael@epa.gov>; Siegel, Kathryn <siegel.kathryn@epa.gov>

Subject: RE: Request for information

Hello Larry,

Thanks for reaching out. As I mentioned on the phone, we are available to provide technical assistance, short of giving a “stamp of approval”. We are still learning a lot from our testing as well as testing conducted by others, so I wouldn’t say that there is a standard template at this time. If you’d like to set up a technical call to discuss monitoring plan/methodology and other issues, I’ve cc’d Michael Compher who would be a part of that meeting along with me. I believe that we are available on Friday if you like.

As for our QAPP: you can find it posted online:

https://www.epa.gov/sites/production/files/2018-11/documents/qapp_eto_willowbrook_v1.4_final_signed.pdf

Hope that is helpful.

-Ed

-Edward Nam, PhD
Director, Air and Radiation Division
US EPA, Region 5, Mail code A-18J
77 W. Jackson Blvd.
Chicago, IL 60604-3590
Phone 312-353-2192 nam.ed@epa.gov

From: Mackey, Lawrence J. <LMackey@lakecountyil.gov>

Sent: Tuesday, March 05, 2019 4:12 PM

To: Nam, Ed <nam.ed@epa.gov>

Subject: Request for information

Ed-

We are nearing a decision to hire a consultant to conduct air monitoring for EtO around the two sites in Lake County. Our Executive Director, Mark Pfister, has asked me to reach out to you to obtain the EPA's approved/preferred EtO monitoring plan methodology, and also your quality assurance project plan (QAPP). We want to assure that any testing we conduct meets the same standards and has the same validity of samples collected by EPA.

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Larry

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From: [Siegel, Kathryn](#)
To: [Mackey, Lawrence J.](#)
Subject: Accepted: Discuss EtO testing specs
Start: Friday, March 08, 2019 12:00:00 PM
End: Friday, March 08, 2019 1:00:00 PM
Location: Phone conference: Call-in line: **Nonrespo** // Access code: **Nonres**

From: [Mackey, Lawrence J.](#)
To: [Compher, Michael](#)
Cc: [Siegel, Kathryn](#); [Weinstock, Lewis](#); [Julie Armitage](#); [Nam, Ed](#)
Subject: RE: Request for information
Date: Friday, March 08, 2019 3:15:49 PM

Thanks very much for this info and for the info shared on the call today. It is much appreciated. Looks like we have some reading to do.

Thanks again.

Larry

Lawrence J. Mackey, LEHP

Deputy Director, Prevention

Lake County Health Department and Community Health Center

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From: Compher, Michael <compher.michael@epa.gov>
Sent: Friday, March 8, 2019 3:12 PM
To: Mackey, Lawrence J. <LMackey@lakecountyil.gov>
Cc: Siegel, Kathryn <siegel.kathryn@epa.gov>; Weinstock, Lewis <Weinstock.Lewis@epa.gov>; Julie Armitage <Julie.Armitage@Illinois.gov>; Nam, Ed <nam.ed@epa.gov>
Subject: RE: Request for information

Larry,

As promised on our call with you today, I've compiled several links to resources and reference materials on monitoring below. Several of these documents are very large, so I've added some notes to help you focus your review based on the early phase you are in with respect to developing a monitoring plan in Lake County.

EPA operates a national network of air toxics monitor for air toxics trends. Here is a link to the National Air Toxics Trends Sites (NATTS) Technical Assistance Document (TAD). Although EtO has not historically been a routine analyte measured at these sites, each of these sites (there is one in Northbrook, IL operated by IEPA) does collect canisters on a nationally consistent 1:6 day schedule year round. Other samples and air pollution measurements are collected at many of these monitoring sites. Pages 17-19 of the NATTS TAD cover monitor siting. You may also be interested in reviewing portions of Chapter 4 (Sample and Analysis Methods), particularly the parts discussing VOC or canister sampling. The data validation tables on page 74 could be informative in your planning.
https://www3.epa.gov/ttnamti1/files/ambient/airtox/NATTS%20TAD%20Revision%203_FINAL%20October%202016.pdf

EPA recently published an Air Sensor Guidebook. Although you aren't considering using sensors, there are several sections of this document that are applicable to the activities you are planning and it is written for a less technical audience. Table 1 on page 5 outlines common applications for collecting air monitoring data (research, exposure characterization, info/awareness, etc.). Sections 2.3 and 2.4 (Important Air Quality Concepts and Characteristics, and Atmospheric Pollutants, Their Sources, and Concentration Ranges) starting on page 11, is the portion of this document

that I think will be most helpful to you. Lastly, Section 4 discusses “How to Collect Useful Data using Air Sensors”. Although you are not using sensors, this section poses a lot of the same questions you are asking, and may help you identify additional questions to consider in your planning. https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NERL&dirEntryId=277996&simpleSearch=1&searchAll=air+sensor+guidebook

40 CFR Part 58 contains the National Air Monitoring Program’s requirements for criteria pollutant monitoring. Although you are monitoring EtO, which is not one of EPA’s six criteria pollutants, Appendix D (Network Design Criteria for Ambient Monitoring) and Appendix E (Probe and Monitoring Path Siting Criteria for Air Quality Monitoring) to Part 58 will help guide you in selecting sampling locations to help you meet your study objectives.

Appendix D - https://www.ecfr.gov/cgi-bin/retrieveECFR?n=40y6.0.1.1.6#ap40.6.58_161.a

Appendix E - https://www.ecfr.gov/cgi-bin/retrieveECFR?n=40y6.0.1.1.6#ap40.6.58_161.e

Even with these focused resources, there is a lot of information to digest. Please reach out to me if you have questions or need help navigating or understanding these resources.

Michael

Michael Compher
Chief, Air Monitoring and Analysis Section
Region 5 Air and Radiation Division
U.S. Environmental Protection Agency
Phone: 312-886-5745

From: Nam, Ed

Sent: Thursday, March 07, 2019 8:21 AM

To: Mackey, Lawrence J. <LMackey@lakecountyl.gov>

Cc: Compher, Michael <compher.michael@epa.gov>; Siegel, Kathryn <siegel.kathryn@epa.gov>; Weinstock, Lewis <Weinstock.Lewis@epa.gov>; Julie Armitage <Julie.Armitage@Illinois.gov>

Subject: Re: Request for information

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your help.

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Deputy Director, Prevention

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From: Nam, Ed <nam.ed@epa.gov>
Sent: Wednesday, March 6, 2019 8:32 AM
To: Mackey, Lawrence J. <LMackey@lakecountyil.gov>
Cc: Compner, Michael <compner.michael@epa.gov>; Siegel, Kathryn <siegel.kathryn@epa.gov>
Subject: RE: Request for information

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Hope that is helpful.

-Ed

-Edward Nam, PhD
Director, Air and Radiation Division
US EPA, Region 5, Mail code A-18J
77 W. Jackson Blvd.
Chicago, IL 60604-3590
Phone 312-353-2192 nam.ed@epa.gov

From: Mackey, Lawrence J. <LMackey@lakecountyil.gov>
Sent: Tuesday, March 05, 2019 4:12 PM
To: Nam, Ed <nam.ed@epa.gov>
Subject: Request for information

Ed-

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Larry

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